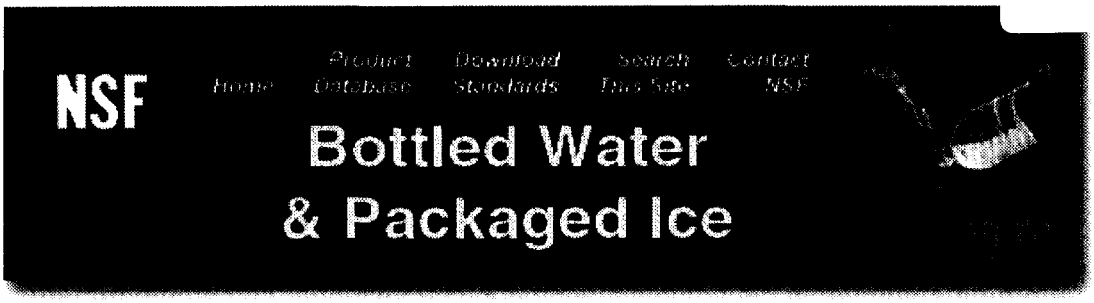


# NSF Certification

For bottled water and packaged ice products to become NSF Certified, producers must meet three basic requirements.

**1. NSF auditors will make unannounced visits to a facility to conduct stringent inspection of every aspect of the operation--from water sources to production practices.**

**2. Extensive NSF annual testing of the products for over 140 chemical, radiological and microbiological contaminants.**

**3. Must comply with more than 50 individual policies governing every aspect of the program - from testing to advertising to NSF enforcement actions.**

The Bottled Water Certification program verifies that a bottling facility and product waters meet the requirements of FDA Title 21 Code of Federal Regulations (CFR) Chapter 1, Parts 110, 129, and 165, or Codex Alimentarius requirements (EC 80/777). The program provides for an annual unannounced plant inspection, source/product water testing and container/closure testing in accordance with the appropriate federal regulations.

Both source and product waters are sampled and tested for the health and aesthetic contaminants listed below, as well as volatile organic chemicals (VOC) of current interest. The parameters include:

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Public Affairs Specialist
FDA 202-205-4144

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NSF
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| | | | |
|---|---|---|---|
| Alkalinity | Manganese | Bromodichloromethane (TTHM) | 1,4-Dichlorobenzen |
| Antimony | Mercury | Chlorodibromomethane (TTHM) | Benzene |
| Arsenic | Nickel | Chloroform (TTHM) | VOC (50 chemicals) |
| Barium | Nitrate (N) | Endrin | PCBs |
| Beryllium | Nitrite (N) | Lindane | Herbicides |
| Cadmium | pH | Methoxychlor | Pesticides |
| Calcium | Phenolics | Toxaphene | Radionuclides |
| Chloride | Potassium | 2,4-D | |
| Chromium | Silver | 2,4,5-TP (Silvex) | |
| Color | Sodium | Vinyl Chloride | |
| Copper | Total Dissolved Solids | Methylene Chloride | |
| Cyanide | Sulfate | 1,1-Dichloroethene | |
| Fluoride | Tallium | 1,2-Dicholorethane | |
| Foaming Agents | Turbidity | 1,1,1-Trichloroethene | |
| Iron | Zinc | Trichlorotherene (TCE) | |
| Lead | Corrosivity | Tetrachloroethene (PCE) | |
| Magnesium | Bromoform (TTHM) | Chlorobenzene | |

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# FAQs

**? How is bottled water regulated by the Federal Government?**

The US Food and Drug Administration (FDA), which regulates bottled water as a food, requires that every bottled water product be fully tested annually for chemical, physical, and radiological contaminants. Some states also require annual testing for additional contaminants, to be licensed to sell bottled water in those states. In addition, the International Bottled Water Association (IBWA) requires that all its bottler members test every year for other contaminants the FDA is in the process of regulating. NSF verifies annually during surprise inspections that IBWA bottler members are complying.

**? Does the certified bottled water product have to be free from contaminants or just have the contaminants under approved levels?**

The contaminants must be below the maximum permitted level. However, a report the bottler can send you upon request will show that most contaminants are almost never detected.

**? Is each NSF Certified bottled water product tested for all of the listed contaminants?**

Yes, all bottled water products are analyzed for all of the contaminants every year.

**? Do the same regulations apply to packaged ice?**

Yes.

**? What is the IBWA (International Bottled Water Association)?**

IBWA is the trade association for the bottled water industry. Founded in 1958, the association represents bottlers that account for approximately 85 percent of the total bottled water sales in the U.S. The associatio also has foreign bottlers who sell and distribute imported waters in the U.S. Membership is open to manufacturers of bottled water, suppliers, distributors, and other classes of membership. The association serves the membership with government relations, membership services, public relations activities, technic training, and various publications on the industry.

IBWA requires NSF inspections of all its members, to assure you that all of the required testing is done every year as required by the FDA and individual states, and that the test results are satisfactory. So, when purchasing bottled water, look on the label for the words "IBWA Bottler Member" or "Member of IBWA." Many member bottlers also voluntarily have their products certified by NSF, so you can also look for the NSF Mark on the label. However, use of the NSF Mark by the bottler is optional.

**? What if this book doesn't answer my questions?**

The International Bottled Water Association can provide you with information on specific bottlers. You cai visit their website at **www.bottledwater.org**, or you can call them at **1-800-WATER11**.

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# Types of Bottled Water & Packaged Ice

Bottled water is defined by the FDA as water that is intended for human consumption and is sealed in bottles or other containers with no added ingredients (except that it may optionally contain fluoride, or safe and suitable antimicrobial agents). There are several types of bottled water, depending upon the source of the water. The FDA has established Standards of Identity for bottled water, which are uniform definitions applying to all bottled water in the U.S., regardless of where the water is purchased.

**Artesian Water** - Is from a well tapping confined aquifer, in which the water level stands at some height above the top of the aquifer. May also be known as "artesian well water."

**Fluoridated** - Contains fluoride added within the limitations established in the Code of Federal Regulation This category often includes water classified as "For Infants," or "Nursery."

**Ground Water** - Is from a subsurface saturated zone that is under a pressure equal to or greater than atmospheric pressure.

**Mineral Water** - Contains not less that 250 parts per million (ppm) total dissolved solids (TDS), comes from a source tapped at one or more bore holes or springs, and originates from a geologically and physicall protected underground water source. Mineral water is distinguished from other types of water by its consta level and relative proportions of minerals and trace elements at the point of emergence from the source, du to the cycles of natural fluctuations. No minerals may be added to this water. If the TDS content of mineral water is below 500 ppm, or if it is greater than 1,500 ppm, the statement "low mineral content" or the statement "high mineral content," respectively, will appear on the label. If the TDS of mineral water is between 500 and 1,500 ppm, no additional statement need appear.

**Purified Water** - Has been produced by distillation, deionization, reverse osmosis, or other suitable processes and meets the definition of "purified water" in the United States Pharmacopeia. May also be known as "demineralized water."

**Sparkling Water** - Contains, after treatment and possible replacement of carbon dioxide, the same amount of carbon dioxide that it had at emergence from the source.

**Spring Water** - Is derived from an underground formation from which water flows naturally to the surface of the earth.

**Sterile Water** - Meets the requirements under "Sterility Tests" <71> in the United States Pharmacopeia. May also be known as "sterilized water."

**Well Water** - Is taken from a hole which is bored, drilled, or otherwise constructed in the ground, tapping the water of an aquifer.

**What are the various types of packaged ice?**

Generally, packaged ice comes as a thick-walled cylinder (or tube), or as fragmented pieces of flat ice.

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# Categories of Contaminants

Listed below are the categories of contaminants that bottled water and packaged ice producers must test for every year.

**Health-Related Contaminants**

**Inorganic Chemicals** - This includes heavy metals such as arsenic, barium, beryllium, cadmium, chromiu lead and mercury, as well as contaminants such as nitrite and nitrate. Most bottled waters will not contain these, although a few may have a trace of arsenic, barium or nitrate at concentrations far below any level of health concern.

**Volatile Organic Chemicals (VOC)** - These types of chemicals include benzene (a gasoline component),

trichloroethylene and tetrachloroethylene (dry cleaning solvents), and trihalomethanes such as chloroform ( chlorination byproduct common in some municipal supplies). Again, most bottled water will be free of the more than forty (40) chemicals in the VOC group.

**Herbicides, Pesticides, PCBs** - These are a very broad group of organic chemicals, such as 2, 4-D, toxaphene, aldicarb, diquat, chlordane, and polychlorinated biphenyls (PCBs). Unless the source water is from an area of intense agricultural or industrial use, bottled water will not contain these chemicals.

**Physical Characteristics** - Included here are turbidity (cloudiness) and radioactive elements such as radiur and strontium, in addition to those naturally occurring such as carbon-14 and potassium-40. Because of the filtration and processing bottled water undergoes, it will have very low turbidity, and may have a trace leve of naturally-occurring radioactivity that is well below the established health limits.

**Coliform Bacteria** - Although not disease-causing themselves, their presence indicates the possibility that other disease-causing bacteria may be present. Because more than 75% of all bottled water comes from protected underground water sources, and because virtually all bottled water--regardless of the source--is disinfected with ozone (which is also effective against Cryptosporidium cysts), total coliform bacteria are not likely to be present in bottled water.

## Aesthetic Contaminants

**Inorganic Chemicals** - These include iron, manganese, zinc, chloride, sulfate, total dissolved solids and fluoride. At high enough levels, they can cause taste and odor problems. Usually these are present at a significant level only in highly mineralized imported waters.

**Physical Characteristics** - Color, odor, and pH are aspects covered by this group. Problems with these characteristics are rarely encountered.